Very Fast Delivery products of OMI

Aura Science Team Meeting

September 2006, Boulder

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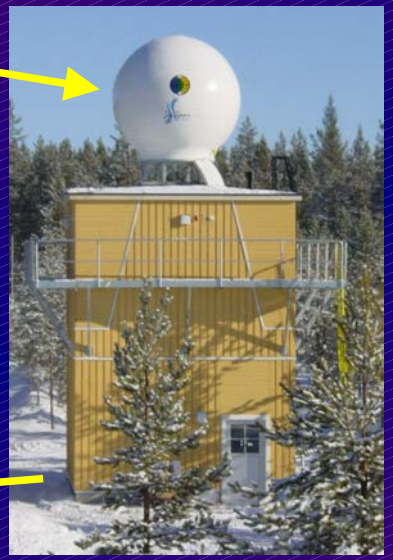
Anssi Mälkki, Gilbert Leppelmeier, Osmo Aulamo

Finnish Meteorological Institute

Basics, Processing facility:

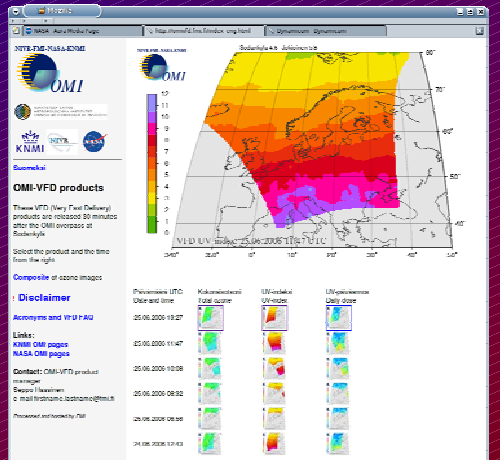
beeb beeb



2.4 m dish antenna, receivers and control computer

~700 km

ARC (Arctic Research Center)
Processing facility: Linux clusters for processing, controlling and archiving

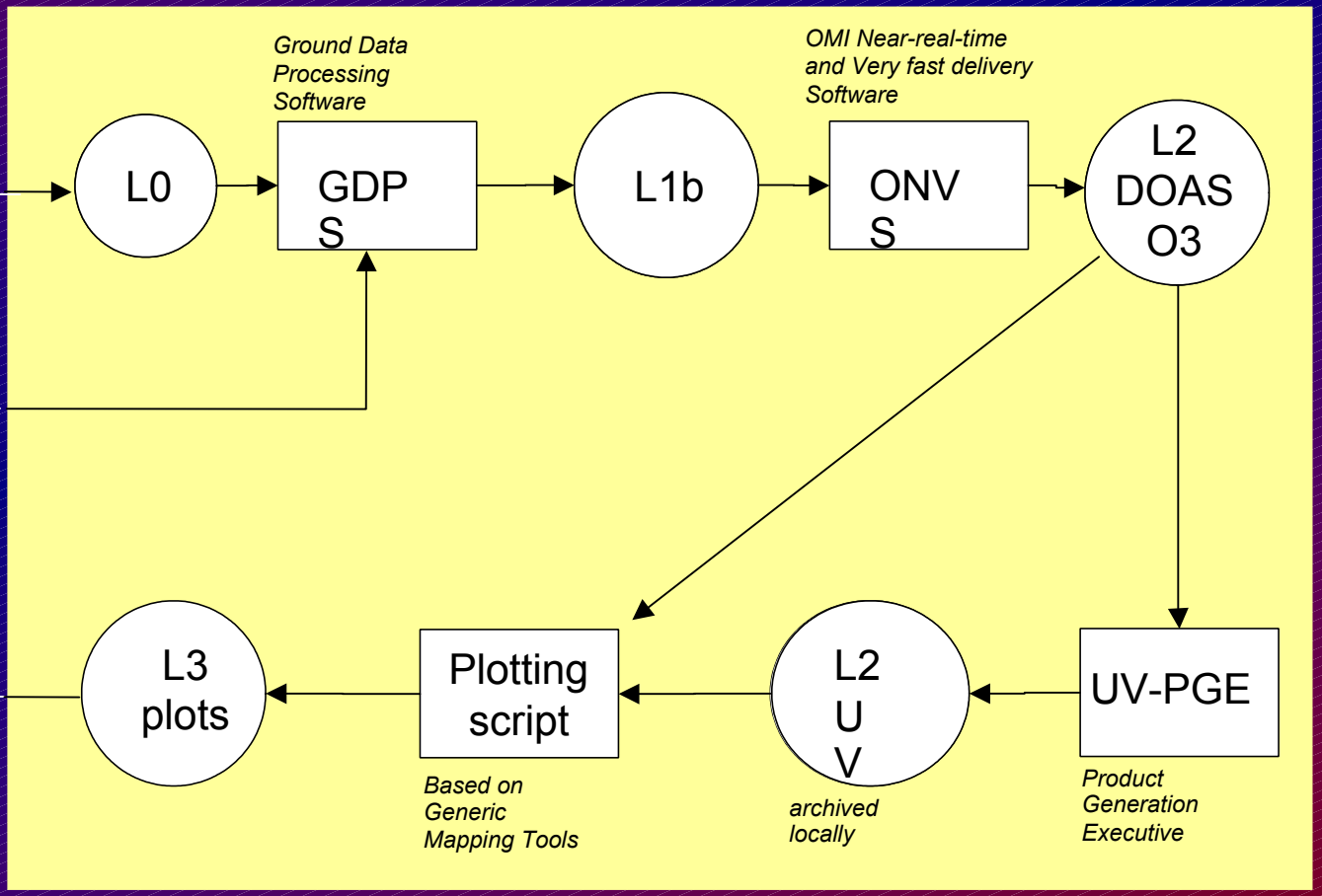


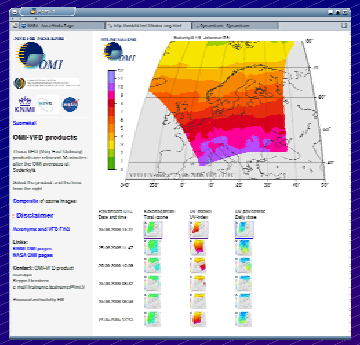
FMI's www server

Basics, Processing chain:

Direct Broadcast

Components of this chain comes from KNMI, FMI and NASA

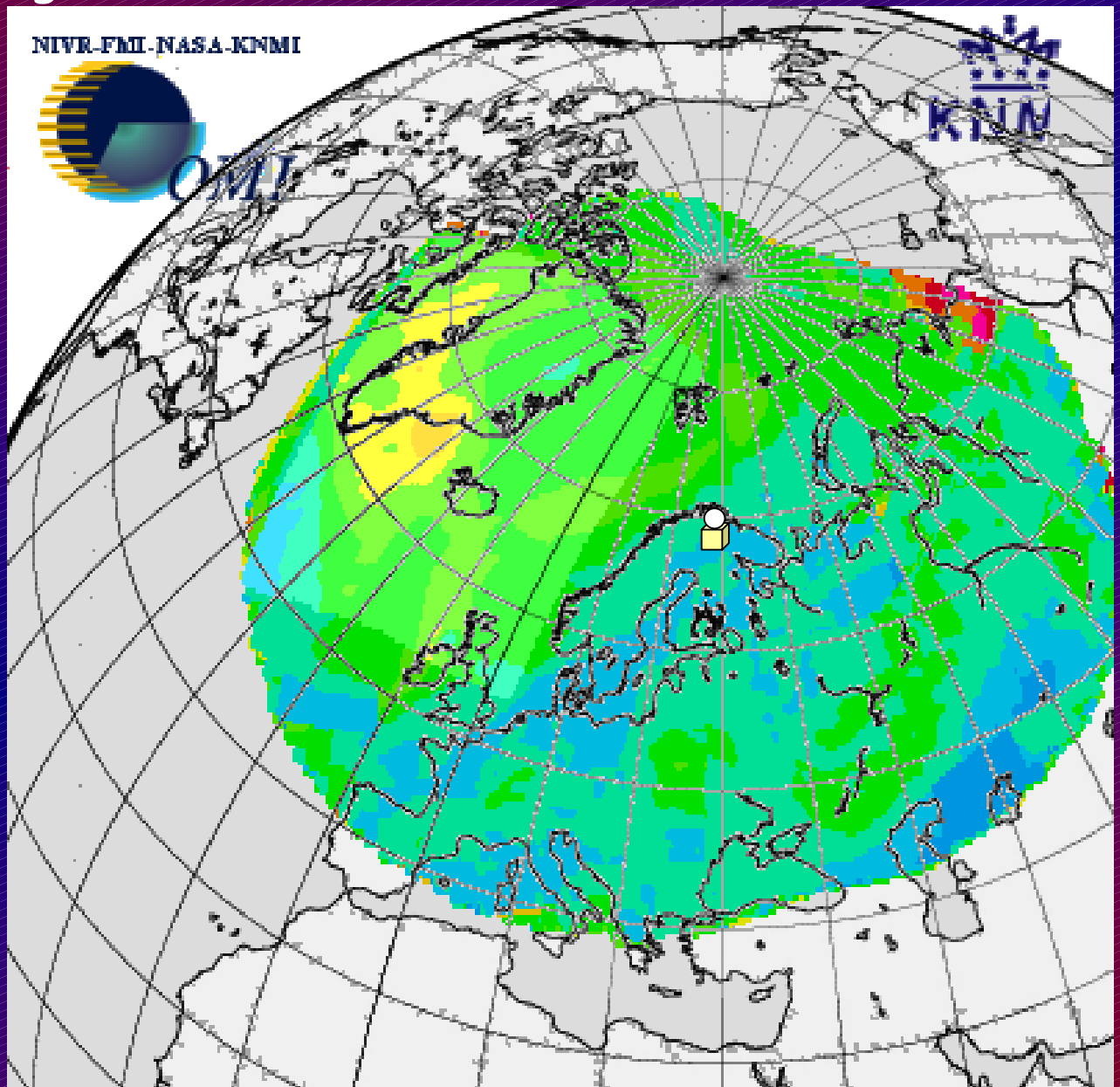




15 min

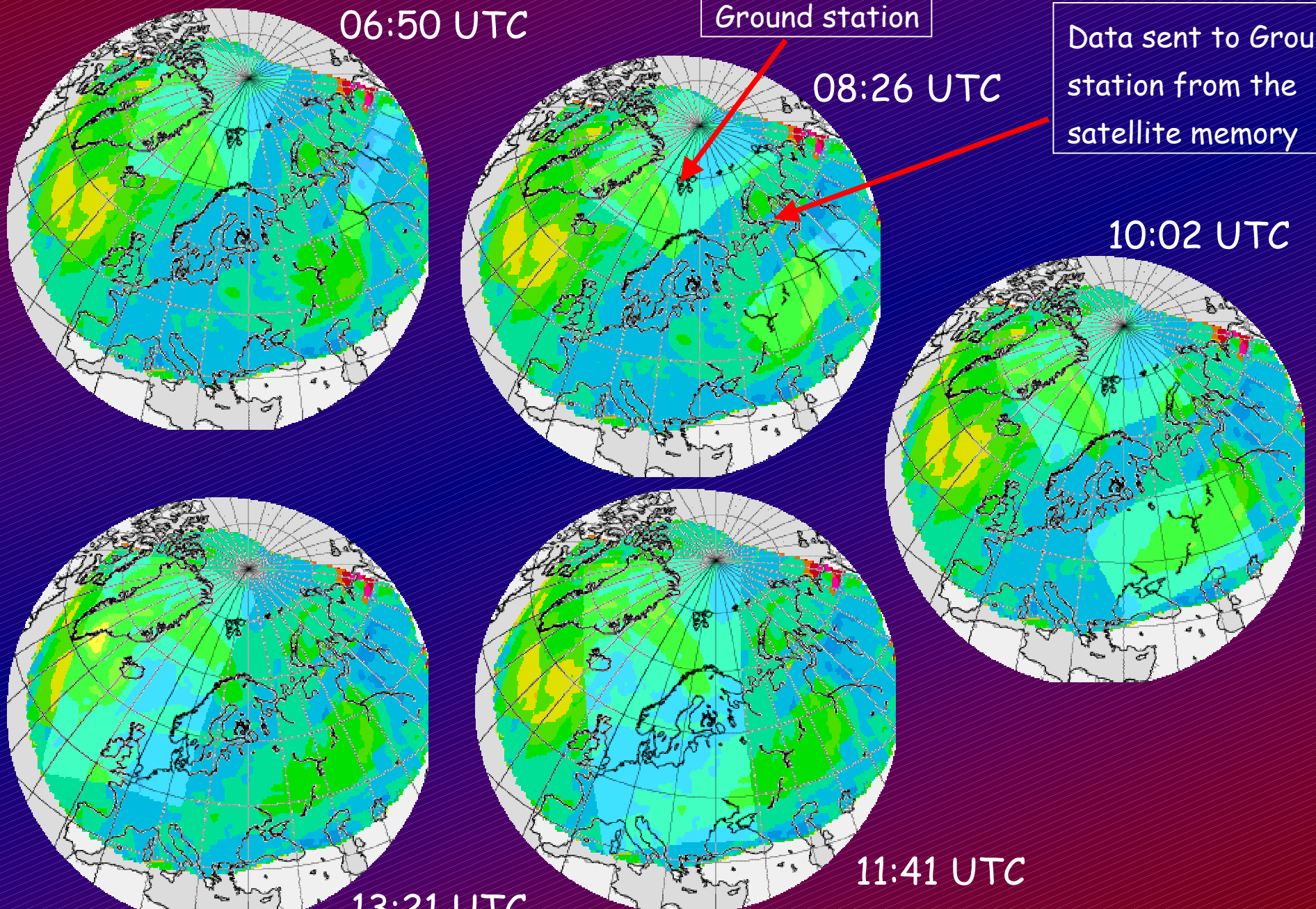
What we can see with the Direct Broadcast?

Areal coverage, 01.02.2006-19.06.2006:

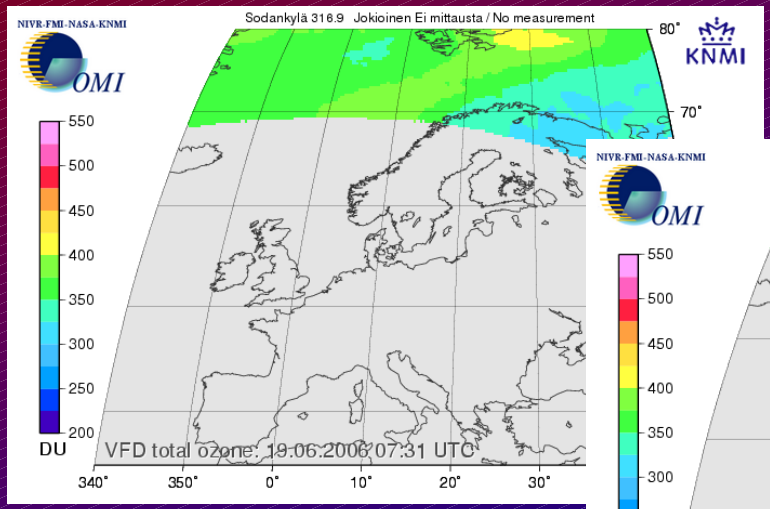


Sodankylä receiving station

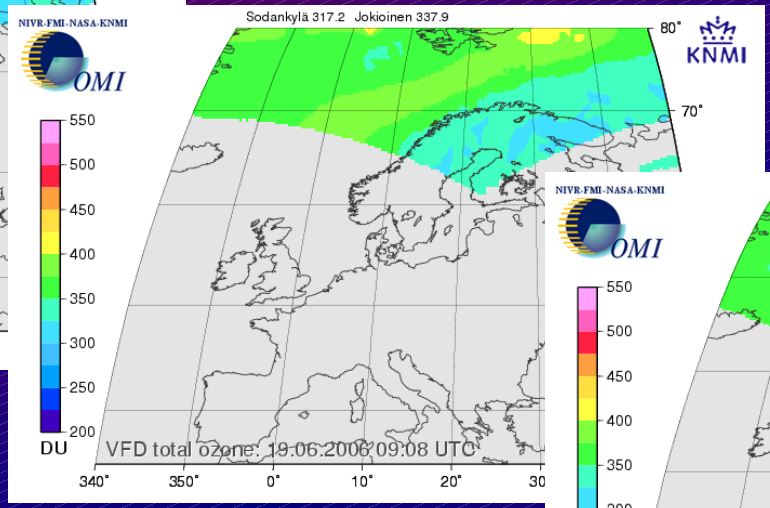
Areal coverage, overpasses 04.07.2006:



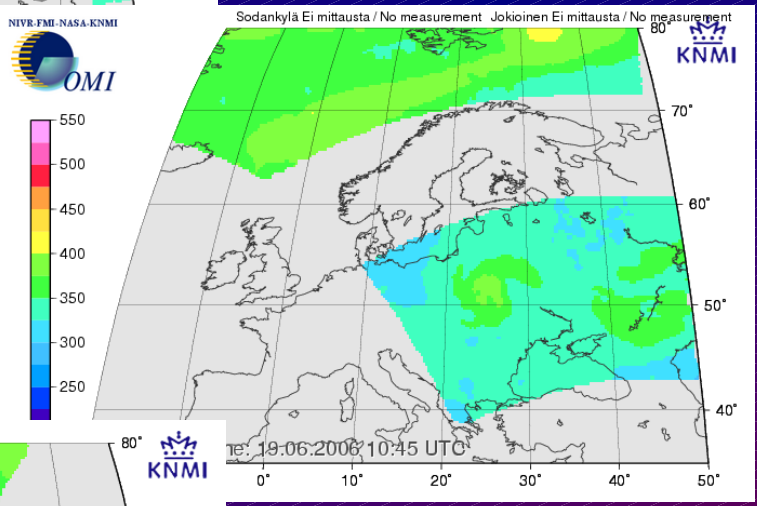
Consistency and temporal coverage, 19.06.2006:



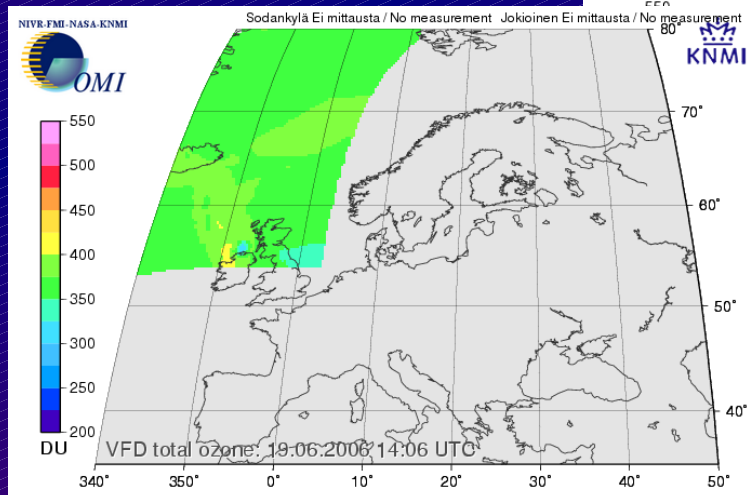
07:31 UTC

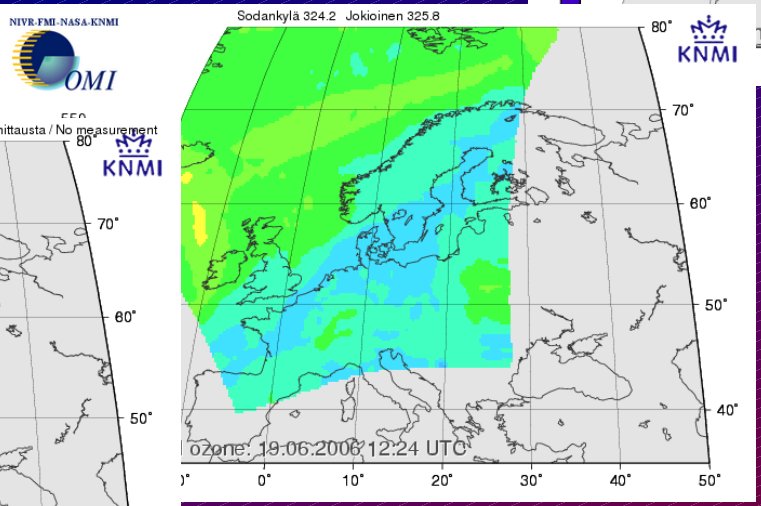


09:08 UTC



10:45 UTC

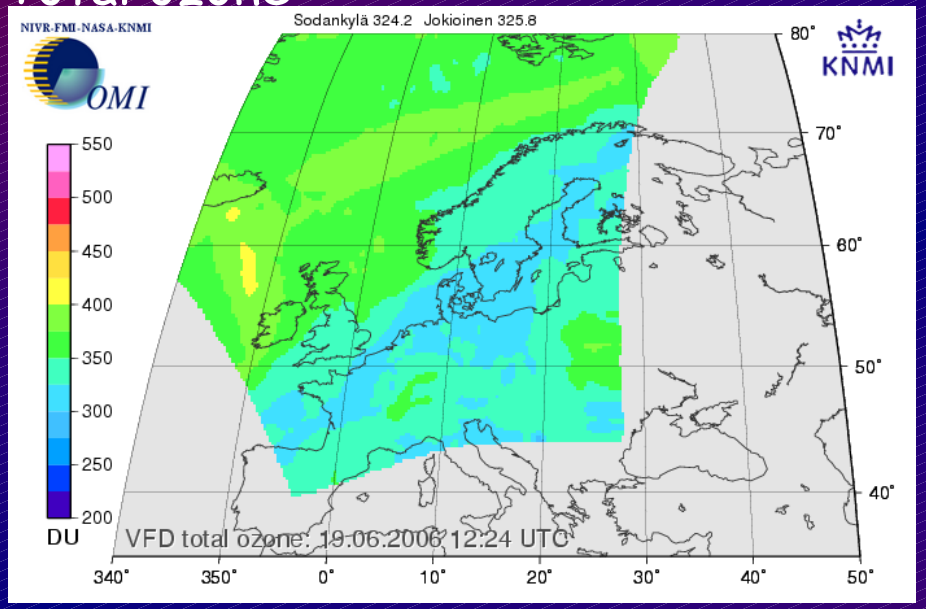




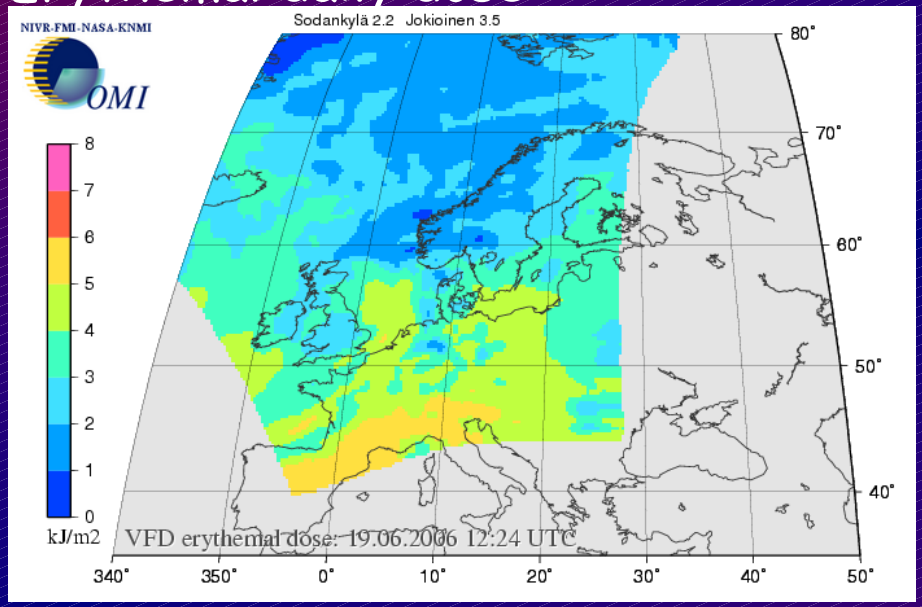
12:24 UTC

Products, 19.06.2006:

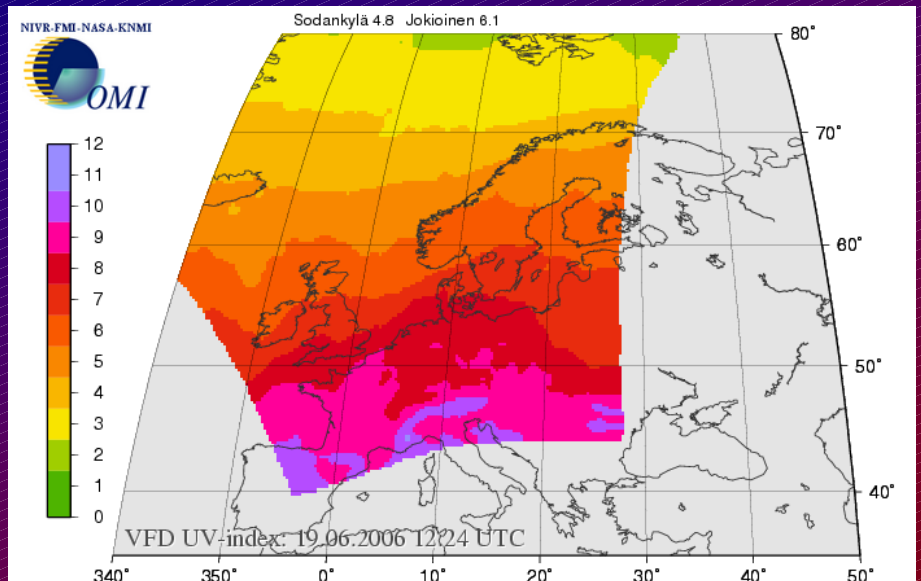
Total ozone



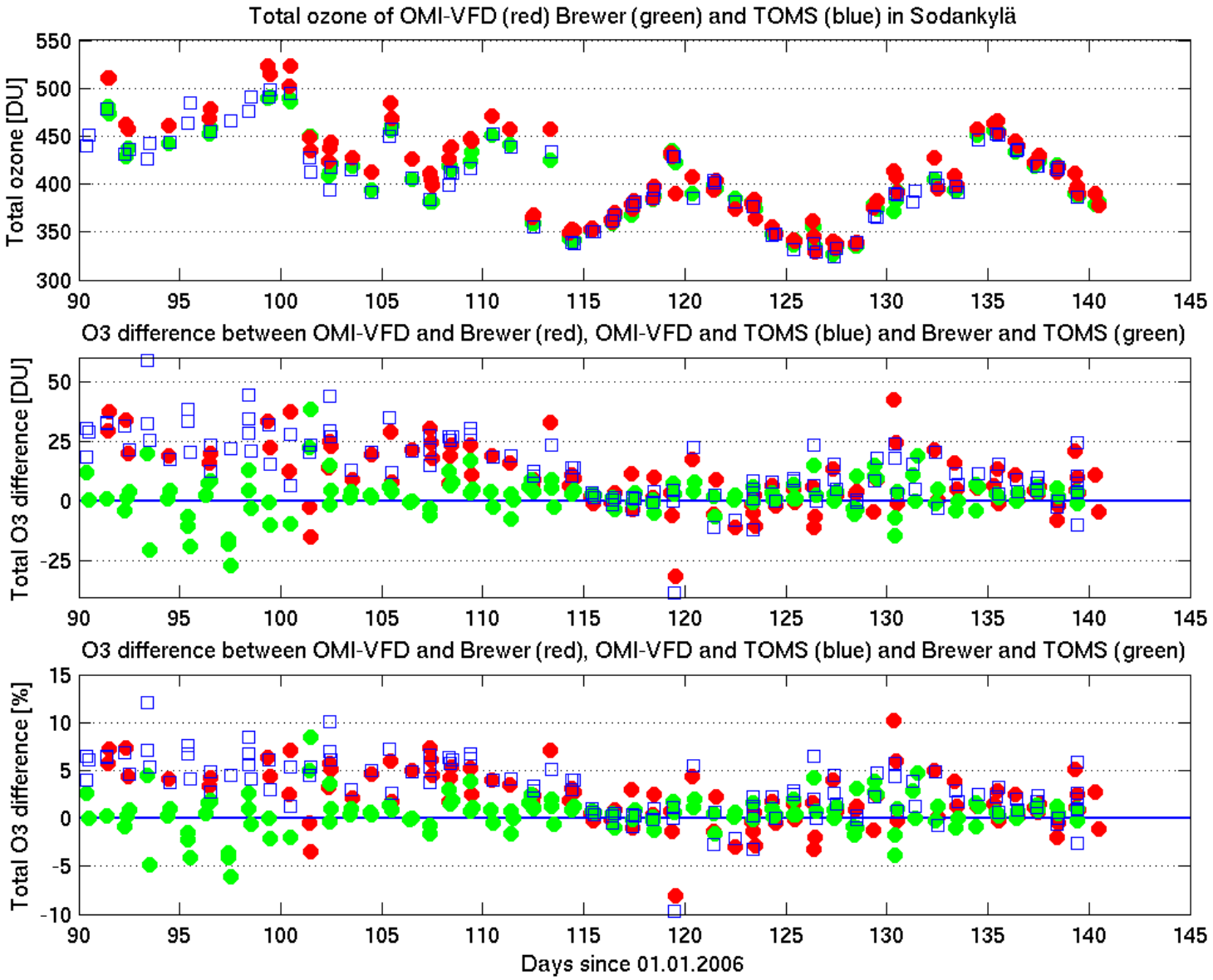
Erythemal daily dose



UV index



Validation: to be done



Brewer data provided by Juha Kaykhu, FMI, TOMS provided by NASA

http://omivfd.fmi.fi/index_eng.html

Mozilla

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NIVR-FMI-NASA-KNMI

OMI

ILMATIETEEN LAITOS
METEOROLOGISKA INSTITUTET
FINNISH METEOROLOGICAL INSTITUTE

KNMI NIVR NASA

Suomeksi

OMI-VFD products

These VFD (Very Fast Delivery) products are released 30 minutes after the OMI overpass at Sodankylä

Select the product and the time from the right

Composite of ozone images

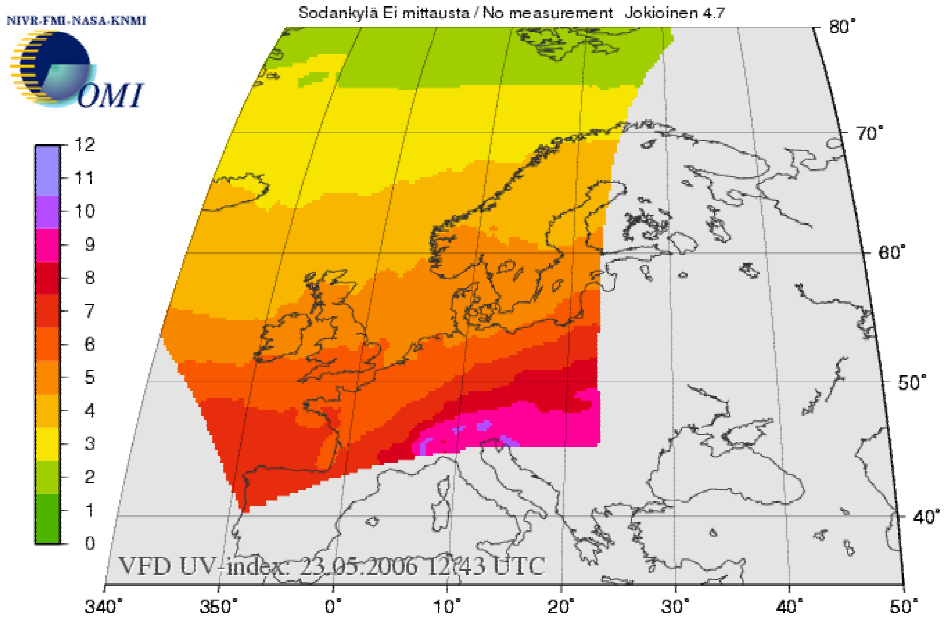
! Disclaimer

Acronyms and VFD FAQ

Links:
KNMI OMI pages
NASA OMI pages

Contact: OMI-VFD product manager
Seppo Hassinen
e-mail firstname.lastname@fmi.fi

Processed and hosted by FMI



Päivämäärä UTC Date and time	Kokonaisotsoni Total ozone	UV-indeksi UV-index	UV-päiväannos Daily dose
23.05.2006 12:43			
23.05.2006 11:03			
23.05.2006 09:26			
23.05.2006 07:50			
22.05.2006 13:40			
22.05.2006 11:59			

Discussion

When to use DB?

- Interest in local conditions <- No global coverage
- Qualitative usage <- No scientific accuracy
- Fast availability, regular time coverage
- Fast decisions required
- Interests of general public

Discussion

Limitations of the Direct Broadcast?

- Configuration files and LU tables are not always up to date
- Dumping of the memory to the ground station
- Limited visibility of the satellite
- Smooth data flow required (every day, operational usage)
- Short processing time required <- fast computers?

Discussion

Possible other targets of the DB?

- Man made environmental hazards
- Dust from deserts
- Pollution over heavily populated areas
- Volcanic emissions and plumes
- Forest fires
- Weather
- ????